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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,890	09/26/2003	Shamim M. Malik	50623.258	9566

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Cameron Kerrigan, Squire
Sanders & Dempsey L.L.P.
One Maritime Plaza, Suite 300
San Francisco, CA 94111

EXAMINER	
DHINGRA, RAKESH KUMAR	
ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
12/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/672,890	MALIK ET AL.	
	Examiner	Art Unit	
	Rakesh K. Dhingra	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) *15 and 16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 17-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/12/07 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-14, 17-28 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended independent claims 1, 4, 6, 8, 9, 1-13, 20, 22, 23 and 28 (for example in claim 1 new limitation "and the mandrel being supported as a cantilever from the first plasma member" has been added). Further applicant has added new claims 29-31.

Accordingly claims 1-31 are now pending out of which claims 1-14 and 17-31 are currently active.

New reference (US Patent No. 6,504,307 – Malik et al) when combined with Jacob reads on amended claim 1 limitations. Accordingly claims 1-3, 5-7 and 31 have been rejected under 35 USC 103 (a) as explained below. Further, the new reference (US Patent No. 6,504,307 – Malik et al) when combined with Usai et al also reads on amended claim 1 limitations. Accordingly claims 1, 8, 10, 12-14, 17-28 and 30 have also been rejected under 35 USC 103 (a) over Usai et al in view of Malik et al as explained below. Balance claims 4, 11 have also been rejected under 35 USC 103 (a) as explained below.

Claims 9, 29 have been indicated as allowable subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5-7, 31 are rejected under 35 U.S.C. 102(3) as being unpatentable over Jacob (US Patent No. 5,087,418) in view of Malik et al (US Patent No. 6,504,307).

Regarding Claims 1, 7, 31: Jacob teaches a plasma apparatus for treating medical devices (Figure 6) comprising:

a support 25 for supporting the object to be plasma processed;

a first plasma member 43 circumscribing the support 25, the first plasma member being grounded;

a second plasma member 41 circumscribing the first plasma member 43; and

a RF plasma generating source 22 in communication with the second plasma member 41 (for example, Fig. 6 and .

Jacob teaches a support 25 for supporting substrates but does not teach that a mandrel for supporting a stent and the mandrel being supported as a cantilever from the first plasma member. However, claim limitation "a mandrel supporting a stent" is related to the material or article worked upon by the apparatus, and the shape/type of support for supporting the article/object to be worked, would obviously depend upon the shape and type of the object/article to be processed.

In this connection courts have ruled:

Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963).

Malik et al teaches a plasma apparatus comprising:

A chamber 104 in which a plasma is generated;

a mandrel 108 supporting an object 102 to be processed in the chamber;

a first plasma member 110 circumscribing the mandrel 108 and where the mandrel 108 is supported as a cantilever from the first plasma member110;

a second plasma member 136 circumscribing the first plasma member 110 in communication with a plasma generating source 134. Malik et al also teach a conductive grid 122 that is supplied voltage from a source 114 and enables control of charged particles in the plasma chamber. Malik et al further teach that the first plasma member 110 can be supplied different voltages depending upon process limitations like avoiding damage to the substrate 102 due to arcing etc (for example, Fig. 1 and col. 2, line 65 to col. 4, line 65). It would be obvious to use a mandrel that is supported as a cantilever from the first plasma member in the apparatus of Jacob for processing stent type substrates.

Therefore it would have been obvious to one of ordinary skills in the art at the time of the invention to provide a mandrel that is supported as a cantilever from the first plasma member as taught by Malik et al in the apparatus of Jacob et al to provide support for stent type substrates.

Further, claim limitation "to coat a stent" is an intended use limitation and since the apparatus of prior art meets the structural limitation of the claim, the same is considered capable of meeting the intended use limitations.

In this connection courts have ruled:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

Regarding Claim 2: Jacob teaches that first plasma members 443 is hollow tubular body and is positioned within the second plasma member 41 that is also a hollow tubular body. Further, Jacob in view of Malik et al teach that the mandrel 108 is positioned within the first plasma member 43 (Jacob – Fig. 6, and Malik et al – Fig. 1).

Regarding Claim 3: Jacob et al teach that the first and second hollow tubular bodies 41, 43 include perforations.

Regarding Claim 5: Malik et al teach that the stent 102 does not contact the first plasma member 110 (Fig. 1).

Regarding Claim 6: Jacob teach that the second plasma member 92 is wrapped around the first plasma member 91 that has a hollow tubular body (Fig. 10).

Claim 4 is rejected under 35 U.S.C. 102(3) as being unpatentable over Jacob (US Patent No. 5,087,418) in view of Malik et al (US Patent No. 6,504,307) as applied to claims 1-3, 5-7, 31 and further in view of Pui et al (US Patent No. 7,247,338).

Regarding Claim 4: Jacob in view of Malik et al teach all limitations of the claim including a stent 102 supported by a mandrel 108, where the mandrel 108 is supported by a first plasma member 110 that is a hollow tubular shaped body.

Jacob in view of Malik et al do not teach the stent is positioned in the center of the first hollow body.

Pui et al teach a stent coating apparatus comprising a stent 440 positioned in the center of a first hollow tubular body 458 (for example, Fig. 11A, 11B and col. 33, lines 33-62) so that axis of stent structure coincides with the axis of the hollow tubular body 458 which enables uniformity of coating on the stent. Though Pui et al do not teach the coating process to be a plasma process, the positioning of the stent in the center of the hollow tubular body would enable uniformity of coating on the stent in a plasma process also.

Therefore it would have been obvious to one of ordinary skills in the art at the time of the invention to position the stent in the center of the first hollow tubular body, as taught by Pui et al in the apparatus of Jacob in view of Malik et al to obtain uniformity of coating over the surface of the stent.

Claims 1, 8, 10, 12-14, 17-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usai et al (US Patent No. 5,591,268) in view of Malik et al (US Patent No. 6,504,307).

Regarding Claims 1, 24: Usai et al teach a plasma apparatus (Figures 6A, 6B) for processing wafers 19 comprising:

A first plasma member 22 circumscribing the object 19 to be processed, the first plasma member being grounded;

A second plasma member 21 circumscribing the first plasma member 43; and

an RF plasma generating source 18 in communication with the second plasma member 21 (for example, Fig. 6A and col. 9, lines 1-45). Usai et al teach processing of wafers 19 (article to be processed) for which it would obviously need a wafer support (not shown).

Further, claim limitation "a mandrel supporting a stent" is related to the material or article worked upon by the apparatus, and the shape/type of support for supporting the article/object to be worked, would obviously depend upon the shape and type of the object/article to be processed.

In this connection courts have ruled:

Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963).

Usai et al do not teach a mandrel supporting a stent and the mandrel being supported as a cantilever from the first plasma member.

Malik et al teaches a plasma apparatus comprising:

A chamber 104 in which a plasma is generated;

a mandrel 108 supporting an object 102 to be processed in the chamber;

a first plasma member 110 circumscribing the mandrel 108 and where the mandrel 108 is supported as a cantilever from the first plasma member110;

a second plasma member 136 circumscribing the first plasma member 110 in communication with a plasma generating source 134. Malik et al also teach a conductive grid 122 that is supplied voltage from a source 114 and enables control of charged particles in the plasma chamber. Malik et al further teach that first plasma member 110 can be supplied different voltages depending upon process limitations like avoiding damage to the substrate 102 due to arcing etc (for example, Fig. 1 and col. 2, line 65 to col. 4, line 65). It would be obvious to use a mandrel as taught by Malik et al in the apparatus of Usai et al while processing stent type substrates.

Therefore it would have been obvious to one of ordinary skills in the art at the time of the invention to provide a mandrel that is supported as a cantilever from the first plasma member as taught by Malik et al in the apparatus of Usai et al to provide support for stent type substrates.

Regarding Claim 8: Usai et al teach a first plate member 14 in communication with the first plasma member 22 through fixing metal pieces 22b, a second plate member13 positioned over the first plate member 14 and in communication with the second plate member 13, and quartz process chamber 10 (insulator) disposed between the first and second plate members to electrically insulate the plate members (col. 9, lines 1-45).

Regarding Claims 10, 14: Usai et al in view of Malik et al et al teach all limitations of the claim (as already explained above under claims 1, 8) including that the apparatus comprises:

A first tubular member 21;

A grounded second tubular member 23 in which an object to be processed can be placed on a holder (not shown), and where the second tubular member 23 is electrically isolated from the first tubular member 20; and

an RF source 18 in communication with the first tubular member 21;

gas supply pipe 23 (source) for supplying process gas into the process space 28. Usai et al also teach that gas supply pipe 23 can also be disposed in the plasma generation space (that is, in the first tubular member) [for example, Fig. 9A-9C and col. 9, lines 1-55 and column 11, line 62 to column 12, line 25]. Claim limitation "a polymerizable monomer gas" pertains to contents of apparatus during intended use of the apparatus and is not given patentable weight since the structure of prior art meets the claim limitation.

In this connection courts have ruled:

Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

Further, claim limitation "implantable medical device" pertains to the material or article worked upon by the apparatus, and is not given patentable weight since the structure of the prior art apparatus meets the claim limitation.

In this connection courts have ruled:

Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Regarding Claim 12: Usai et al teach that plasma is generated within the first tubular member 21 with the help of RF source 18 (Fig. 6A).

Regarding Claim 13: Usai et al teach that the second tubular member 22 is grounded (Figure 6A).

Regarding Claims 17, 18: Usai et al teach that plasma generating source in the apparatus (RF source 18 and internal and external electrodes 22, 21 generate gaseous plasma. Usai et al also teach that apparatus can be used for other plasma processes including ashing, etching and deposition. Claim limitations modifying surface of the stent and forming a polymer film on stent are intended use limitations and since the structure of prior art meets the claim limitation, the same is considered capable of meeting the intended use limitation.

In this connection courts have ruled:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

Regarding Claims 19, 20: Usai et al teach a gas supply pipe 23 (process gas source) which can also be disposed inside the second plasma member 21 [Figures 9A-9C and column 11, line 62 to column 12, line 25]. Claim limitation "a polymerizable monomer gas" pertains to contents of apparatus during intended use of the apparatus and is not considered to add patentable weight since the structure of prior art meets the claim limitation, as per case law already cited above under claim 10.

Regarding Claims 21, 26: Usai et al teach that plasma generating source in the apparatus (RF source 18 and internal and external electrodes 22, 21 generate gaseous plasma. Usai et al also teach that

apparatus can be used for other plasma processes including ashing, etching and deposition. Claim limitations "to induce polymerization of a plasma polymerizable polymer on a surface of the stent to form a polymer film" is an intended use limitations and since the structure of prior art meets the claim limitation, the same is considered capable of meeting the intended use limitation, as per case law already cited above under claims 17, 18.

Regarding Claim 22, 23, 25, 27, 28: Usai et al teach a gas supply pipe 23 (process gas source) which can also be disposed inside the second plasma member 21 [Figures 9A-9C and column 11, line 62 to column 12, line 25]. Claim limitations "plasma polymerizable monomer is in a gaseous form" is a functional limitation and since the structure of prior art meets the claim's structural limitation (it can supply process reactant in gaseous form), the same is considered capable of meeting the functional limitation, as per case law already cited above under claims 17, 18.

Regarding Claim 30: Claim limitation regarding third and fourth plasma members with the third plasma member circumscribing a second stent mandrel merely duplicates the structure already claimed under claim 24, and is not given patentable weight since the same would be obvious for obtaining increased through-put.

In this connection courts have ruled:

The mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Usai et al (US Patent No. 5,591,268) in view of Malik et al (US Patent No. 6,504,307) as applied to claim 10 and further in view of Jacob (US Patent No. 5,087,418).

Regarding Claim 11: Usai et al in view of Malik et al teach all limitations of the claim including second tubular member 22 having perforated body (Figure 6B – Usai et al).

Usai et al in view of Malik et al do not teach first tubular member includes body with holes disposed therein.

Jacob teaches a plasma apparatus for treating medical devices (Figure 6) comprising:

a wire basket 25 supporting the object to be plasma processed;

a perforated first plasma member 43 circumscribing the wire basket 25, the first plasma member being grounded;

a second metallic perforated cylinder 41 (second plasma member) circumscribing the first plasma member 43; and

an RF source (plasma generating source) in communication with the second plasma member 41. Jacob also teaches an embodiment (Figure 2) wherein the apparatus comprises two tubular members 15, 15a both of which are perforated, to facilitate lower temperature processing (column 4, lines 10-60).

Therefore it would have been obvious to one of skills in the art at the time of the invention to use first tubular member with a perforated body as taught by Jacob et al in the apparatus of Usai et al in view of Malik et al to facilitate low temperature processing.

Allowable Subject Matter

Claims 9, 29 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 9 – Prior arts Usai et al (US Patent No. 5,591,268) and Malik et al (US Patent No. 6,504,307) do not teach claim limitation "wherein the mandrel extends from the first plate member into the first plasma

member and through an opening formed in the second plate member", in the context of remaining limitations of the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rakesh K. Dhingra whose telephone number is (571)-272-5959. The examiner can normally be reached on 8:30 -6:00 (Monday - Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571)-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rakesh K. Dhingra

Karla Moore
Primary Examiner
Art Unit 1763